SPECIFICATIONS CLA50R2D

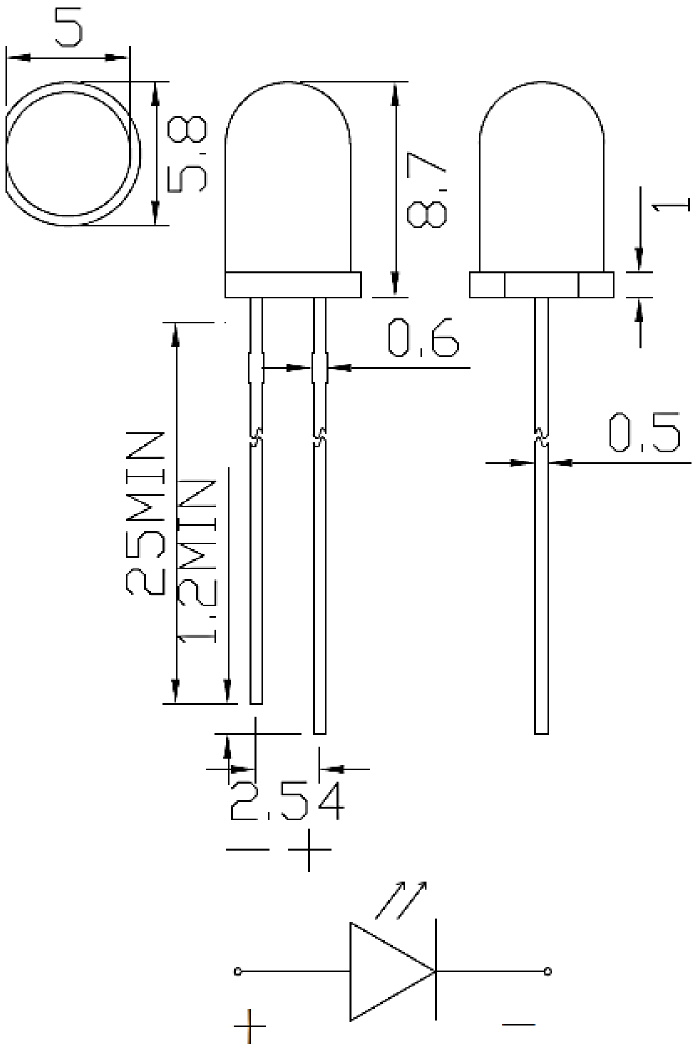
OUTLINES DIMENSIONS

Description

*Round Type
*T1-3/4 (5mm) Diameter
*Lens Color: Red Diffused
*With Flange

Features

*Emitting Color: Red
*High Luminous Intensity
*Technology: InGaAlP



Notes:
1. All Dimensions are in millimeters (inches).
2. Tolerance is ± 0.25mm (0.01”) unless otherwise noted.
3. Specifications are subject to change without notice.

Part Number	Chip Material	Color of Emission	Lens Type	Viewing Angle
CLA50R2D	InGaAlP	Red	Red Diffused	40°

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

Parameter	Symbol	Max Rating	Unit
Power Dissipation	P_D	60	mW
Pulse Current Forward Current	I_{FP}	60	mA
Continuous Forward Current	I_F	30	mA
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{OPR}	-25~+85	°C
Storage Temperature Range	T_{STG}	-30~+85	°C
I_{FP} = Pulse Width ≤ 10 ms, Duty Ratio ≤1/10. Soldering Condition: 260 °C/ 5sec			

OPTICAL-ELECTRICAL CHARACTERISTICS (TA=25°C)

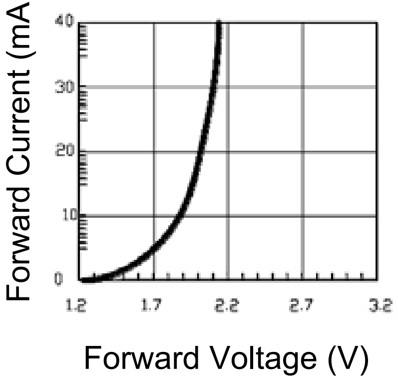
Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Luminous Intensity	I_V	I_F = 20mA	80	150	-	mcd
Forward Voltage	V_F	I_F = 20mA	-	2.1	2.4	V
Reverse Leakage Current	I_R	V_R = 5V	-	-	10	μA
Viewing Angle	$2\theta_{1/2}$	I_F = 20mA	-	40	-	deg
Dominant Wavelength	λ_D	I_F = 20mA	630	-	640	nm

*Tolerance of viewing angle: -10 / +5 deg.

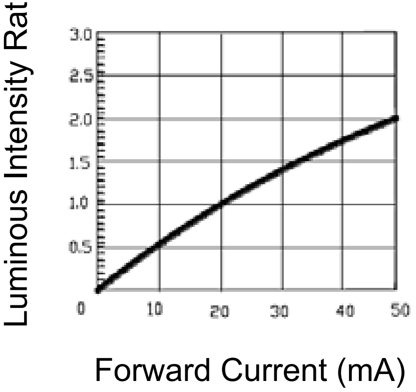
RoHS Compliant
Lead Free

OPTICAL CHARACTERISTIC CURVES

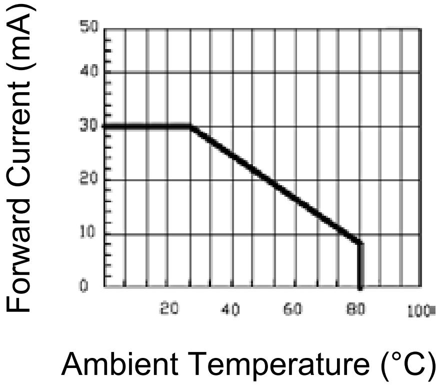
Forward Current vs. Forward Voltage



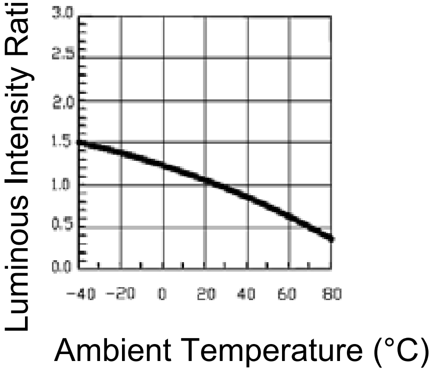
Forward Current vs. Relative Luminous Intensity



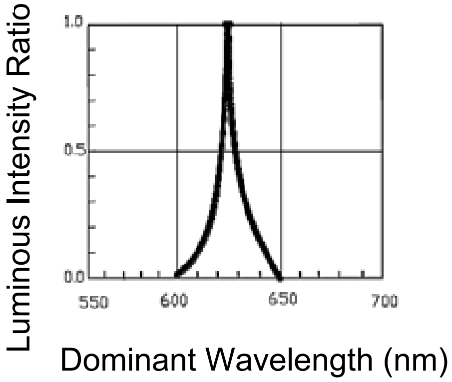
Forward Current vs. Ambient Temperature



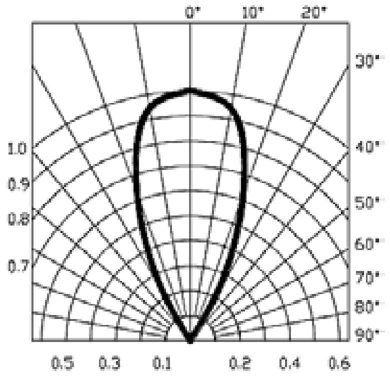
Relative Luminous Intensity vs. Ambient Temperature



Relative Luminous Intensity vs. Main Wavelength



Radiation Diagram



SOLDERING CONDITIONS – LAMP TYPE LED

* Solder the LED no closer than 3mm from the base of the epoxy bulb. Soldering beyond the base of the tie bar is recommended.

* Recommended soldering conditions

Dip Soldering	
Pre-Heat	100 ˚C Max
Pre-Heat Time	60 Second Max
Solder Bath Temperature	260 ˚C Max
Dippng Time	5 Second Max
Dipping Position	No lower than 3mm from the base of the epoxy

Hand Soldering		
	3mm Series	Others
Temperature Soldering Time Position	300 ˚C Max 3 Second Max No closer than 3mm from the base of the epoxy	350 ˚C Max 3 Second Max No closer than 3mm from the base of the epoxy

* Do not apply any stress to the lead. Particularly when heated.

* The LED must not be repositioned after soldering.

* After soldering the LEDs, the epoxy bulb should be protected from mechanical shock or vibration until the LEDs return to room temperature.

* Direct soldering onto a PC board should be avoided. Mechanical stress to the resin may be caused by the PC board warping or from the clinching and cutting of the leadframes. When it is absolutely necessary, the LEDs may be mounted in this fashion, but, the user will assume responsibility for any problems. Direct soldering should only be done after testing has confirmed that no damage, such as wire bond failure or resin deterioration, will occur. LEDs should not be soldered directly to double sided PC boards because the heat will deteriorate the epoxy resin.

* When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.

* Cut the LED leadframes at room temperature. Cutting the leadframes at high temperature may cause LED failure.